

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.

Application Serial Number: 10/550,675
Source: IFWP
Date Processed by STIC: 3/13/07

ENTERED



IFWP

RAW SEQUENCE LISTING

DATE: 03/13/2007

PATENT APPLICATION: US/10/550,675

TIME: 08:37:45

Input Set : F:\EPI-104XC1.ST25.txt

Output Set: N:\CRF4\03132007\J550675.raw

3 <110> APPLICANT: Epimmune Inc.
 4 Tangri, Shabnam
 5 Mothe, Bianca
 6 Sette, Alessandro
 7 Southwood, Scott
 8 Briggs, Kristen
 9 Chestnut, Robert W.

11 <120> TITLE OF INVENTION: Peptides, Polypeptides, and Proteins of Reduced Immunogenicity
 12 and Methods for Their Production

14 <130> FILE REFERENCE: EPI-104XC1

C--> 16 <140> CURRENT APPLICATION NUMBER: US/10/550,675

C--> 17 <141> CURRENT FILING DATE: 2005-09-26

19 <150> PRIOR APPLICATION NUMBER: US 60/459,939

20 <151> PRIOR FILING DATE: 2003-04-02

22 <160> NUMBER OF SEQ ID NOS: 247

24 <170> SOFTWARE: PatentIn version 3.2

26 <210> SEQ ID NO: 1

27 <211> LENGTH: 9

28 <212> TYPE: PRT

29 <213> ORGANISM: Artificial Sequence

31 <220> FEATURE:

32 <223> OTHER INFORMATION: Synthetic sequence derived from erythropoietin

35 <220> FEATURE:

36 <221> NAME/KEY: MISC_FEATURE

37 <223> OTHER INFORMATION: Synthetic sequence derived from erythropoietin

39 <220> FEATURE:

40 <221> NAME/KEY: MISC_FEATURE

41 <222> LOCATION: (1)..(1)

42 <223> OTHER INFORMATION: X = phe, met ,tyr, leu, ile, val, or trp

44 <220> FEATURE:

45 <221> NAME/KEY: MISC_FEATURE

46 <222> LOCATION: (6)..(6)

47 <223> OTHER INFORMATION: X = val, ser, thr, cys, pro, ala, leu, ile, val or phe

49 <220> FEATURE:

50 <221> NAME/KEY: MISC_FEATURE

51 <222> LOCATION: (7)..(7)

52 <223> OTHER INFORMATION: X = met, his, or arg

54 <220> FEATURE:

55 <221> NAME/KEY: MISC_FEATURE

56 <222> LOCATION: (8)..(8)

57 <223> OTHER INFORMATION: X = unknown

59 <220> FEATURE:

60 <221> NAME/KEY: MISC_FEATURE

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61 <222> LOCATION: (9)..(9) ✓
62 <223> OTHER INFORMATION: X = met, his, trp, asp, or glu
64 <400> SEQUENCE: 1
W--> 66 Xaa Met Thr Trp Ile Xaa Xaa Xaa Xaa
67 1 5
70 <210> SEQ ID NO: 2
71 <211> LENGTH: 9
72 <212> TYPE: PRT
73 <213> ORGANISM: Artificial Sequence
75 <220> FEATURE:
76 <223> OTHER INFORMATION: Synthetic sequence derived from erythropoietin
79 <220> FEATURE:
80 <221> NAME/KEY: MISC_FEATURE
81 <223> OTHER INFORMATION: Synthetic sequence derived from erythropoietin
83 <220> FEATURE:
84 <221> NAME/KEY: MISC_FEATURE
85 <222> LOCATION: (1)..(1) ✓
86 <223> OTHER INFORMATION: X = phe, met, or tyr
88 <220> FEATURE:
89 <221> NAME/KEY: MISC_FEATURE
90 <222> LOCATION: (4)..(4) ✓
91 <223> OTHER INFORMATION: X = unknown
93 <220> FEATURE:
94 <221> NAME/KEY: MISC_FEATURE
95 <222> LOCATION: (6)..(6) ✓
96 <223> OTHER INFORMATION: X = val, ser, or thr
98 <220> FEATURE:
99 <221> NAME/KEY: MISC_FEATURE
100 <222> LOCATION: (7)..(7) ✓
101 <223> OTHER INFORMATION: X = met or his
103 <220> FEATURE:
104 <221> NAME/KEY: MISC_FEATURE
105 <222> LOCATION: (8)..(8) ✓
106 <223> OTHER INFORMATION: X = unknown
108 <220> FEATURE:
109 <221> NAME/KEY: MISC_FEATURE
110 <222> LOCATION: (9)..(9) ✓
111 <223> OTHER INFORMATION: X = met or his
113 <400> SEQUENCE: 2
W--> 115 Xaa Met Thr Xaa Ile Xaa Xaa Xaa Xaa
116 1 5
119 <210> SEQ ID NO: 3
120 <211> LENGTH: 193
121 <212> TYPE: PRT
122 <213> ORGANISM: Homo sapiens
125 <220> FEATURE:
126 <221> NAME/KEY: MISC_FEATURE
127 <223> OTHER INFORMATION: Erythropoietin precursor, NCBI Entrez Protein Database
Accession
128 number P01588

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RAW SEQUENCE LISTING

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130 <400> SEQUENCE: 3

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132 Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
133 1          5          10          15
136 Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu
137          20          25          30
140 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu
141          35          40          45
144 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu
145          50          55          60
148 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg
149 65          70          75          80
152 Met Glu Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu
153          85          90          95
156 Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser
157          100         105         110
160 Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly
161          115         120         125
164 Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu
165          130         135         140
168 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile
169 145         150         155         160
172 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu
173          165         170         175
176 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp
177          180         185         190
180 Arg

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184 <210> SEQ ID NO: 4

185 <211> LENGTH: 136

186 <212> TYPE: PRT

187 <213> ORGANISM: Oncorhynchus keta

190 <220> FEATURE:

191 <221> NAME/KEY: MISC_FEATURE

192 <223> OTHER INFORMATION: Calcitonin 1 precursor, NCBI Entrez Protein Database

Accession

193 No. P01263

195 <400> SEQUENCE: 4

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197 Met Val Met Met Lys Leu Ser Ala Leu Leu Ile Ala Tyr Phe Leu Val
198 1          5          10          15
201 Ile Cys Gln Met Tyr Ser Ser His Ala Ala Pro Ala Arg Thr Gly Leu
202          20          25          30
205 Glu Ser Met Thr Asp Gln Val Thr Leu Thr Asp Tyr Glu Ala Arg Arg
206          35          40          45
209 Leu Leu Asn Ala Ile Val Lys Glu Phe Val Gln Met Thr Ser Glu Glu
210          50          55          60
213 Leu Glu Gln Gln Ala Asn Glu Gly Asn Ser Leu Asp Arg Pro Met Ser
214 65          70          75          80
217 Lys Arg Cys Ser Asn Leu Ser Thr Cys Val Leu Gly Lys Leu Ser Gln
218          85          90          95
221 Glu Leu His Lys Leu Gln Thr Tyr Pro Arg Thr Asn Thr Gly Ser Gly
222          100         105         110

```

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Input Set : F:\EPI-104XC1.ST25.txt

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225 Thr Pro Gly Lys Lys Arg Ser Leu Pro Glu Ser Asn Arg Tyr Ala Ser
 226 115 120 125
 229 Tyr Gly Asp Ser Tyr Asp Gly Ile
 230 130 135
 233 <210> SEQ ID NO: 5
 234 <211> LENGTH: 217
 235 <212> TYPE: PRT
 236 <213> ORGANISM: Homo sapiens
 239 <220> FEATURE:
 240 <221> NAME/KEY: MISC_FEATURE
 241 <223> OTHER INFORMATION: Somatotropin precursor, NCBI Entrez Protein Database

Accession

242 No. P01241
 244 <400> SEQUENCE: 5
 246 Met Ala Thr Gly Ser Arg Thr Ser Leu Leu Leu Ala Phe Gly Leu Leu
 247 1 5 10 15
 250 Cys Leu Pro Trp Leu Gln Glu Gly Ser Ala Phe Pro Thr Ile Pro Leu
 251 20 25 30
 254 Ser Arg Leu Phe Asp Asn Ala Met Leu Arg Ala His Arg Leu His Gln
 255 35 40 45
 258 Leu Ala Phe Asp Thr Tyr Gln Glu Phe Glu Glu Ala Tyr Ile Pro Lys
 259 50 55 60
 262 Glu Gln Lys Tyr Ser Phe Leu Gln Asn Pro Gln Thr Ser Leu Cys Phe
 263 65 70 75 80
 266 Ser Glu Ser Ile Pro Thr Pro Ser Asn Arg Glu Glu Thr Gln Gln Lys
 267 85 90 95
 270 Ser Asn Leu Glu Leu Leu Arg Ile Ser Leu Leu Leu Ile Gln Ser Trp
 271 100 105 110
 274 Leu Glu Pro Val Gln Phe Leu Arg Ser Val Phe Ala Asn Ser Leu Val
 275 115 120 125
 278 Tyr Gly Ala Ser Asp Ser Asn Val Tyr Asp Leu Leu Lys Asp Leu Glu
 279 130 135 140
 282 Glu Gly Ile Gln Thr Leu Met Gly Arg Leu Glu Asp Gly Ser Pro Arg
 283 145 150 155 160
 286 Thr Gly Gln Ile Phe Lys Gln Thr Tyr Ser Lys Phe Asp Thr Asn Ser
 287 165 170 175
 290 His Asn Asp Asp Ala Leu Leu Lys Asn Tyr Gly Leu Leu Tyr Cys Phe
 291 180 185 190
 294 Arg Lys Asp Met Asp Lys Val Glu Thr Phe Leu Arg Ile Val Gln Cys
 295 195 200 205
 298 Arg Ser Val Glu Gly Ser Cys Gly Phe
 299 210 215
 302 <210> SEQ ID NO: 6
 303 <211> LENGTH: 110
 304 <212> TYPE: PRT
 305 <213> ORGANISM: Homo sapiens
 308 <220> FEATURE:
 309 <221> NAME/KEY: MISC_FEATURE
 310 <223> OTHER INFORMATION: Insulin precursor, NCBI Entrez Protein Database Accession

No.

311 P01308

RAW SEQUENCE LISTING

DATE: 03/13/2007

PATENT APPLICATION: US/10/550,675

TIME: 08:37:45

Input Set : F:\EPI-104XC1.ST25.txt

Output Set: N:\CRF4\03132007\J550675.raw

313 <400> SEQUENCE: 6

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315 Met Ala Leu Trp Met Arg Leu Leu Pro Leu Leu Ala Leu Leu Ala Leu
316 1          5          10          15
319 Trp Gly Pro Asp Pro Ala Ala Ala Phe Val Asn Gln His Leu Cys Gly
320          20          25          30
323 Ser His Leu Val Glu Ala Leu Tyr Leu Val Cys Gly Glu Arg Gly Phe
324          35          40          45
327 Phe Tyr Thr Pro Lys Thr Arg Arg Glu Ala Glu Asp Leu Gln Val Gly
328          50          55          60
331 Gln Val Glu Leu Gly Gly Gly Pro Gly Ala Gly Ser Leu Gln Pro Leu
332 65          70          75          80
335 Ala Leu Glu Gly Ser Leu Gln Lys Arg Gly Ile Val Glu Gln Cys Cys
336          85          90          95
339 Thr Ser Ile Cys Ser Leu Tyr Gln Leu Glu Asn Tyr Cys Asn
340          100          105          110

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343 <210> SEQ ID NO: 7

344 <211> LENGTH: 110

345 <212> TYPE: PRT

346 <213> ORGANISM: Homo sapiens

349 <220> FEATURE:

350 <221> NAME/KEY: MISC_FEATURE

351 <223> OTHER INFORMATION: Insulin Precursor, NCBI Entrez Protein Database Accession

No.

352 P01308

354 <400> SEQUENCE: 7

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356 Met Ala Leu Trp Met Arg Leu Leu Pro Leu Leu Ala Leu Leu Ala Leu
357 1          5          10          15
360 Trp Gly Pro Asp Pro Ala Ala Ala Phe Val Asn Gln His Leu Cys Gly
361          20          25          30
364 Ser His Leu Val Glu Ala Leu Tyr Leu Val Cys Gly Glu Arg Gly Phe
365          35          40          45
368 Phe Tyr Thr Pro Lys Thr Arg Arg Glu Ala Glu Asp Leu Gln Val Gly
369          50          55          60
372 Gln Val Glu Leu Gly Gly Gly Pro Gly Ala Gly Ser Leu Gln Pro Leu
373 65          70          75          80
376 Ala Leu Glu Gly Ser Leu Gln Lys Arg Gly Ile Val Glu Gln Cys Cys
377          85          90          95
380 Thr Ser Ile Cys Ser Leu Tyr Gln Leu Glu Asn Tyr Cys Asn
381          100          105          110

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384 <210> SEQ ID NO: 8

385 <211> LENGTH: 187

386 <212> TYPE: PRT

387 <213> ORGANISM: Homo sapiens

390 <220> FEATURE:

391 <221> NAME/KEY: MISC_FEATURE

392 <223> OTHER INFORMATION: Interferon-beta, NCBI Entrez Protein Database Accession No.

393 AAC41702

395 <400> SEQUENCE: 8

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397 Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu Leu Cys Phe Ser
398 1          5          10          15

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/550,675

DATE: 03/13/2007
TIME: 08:37:46

Input Set : F:\EPI-104XC1.ST25.txt
Output Set: N:\CRF4\03132007\J550675.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. ~~1,6,7,8,9~~
Seq#:2; Xaa Pos. ~~1,4,6,7,8,9~~

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/550,675

DATE: 03/13/2007

TIME: 08:37:46

Input Set : F:\EPI-104XC1.ST25.txt

Output Set: N:\CRF4\03132007\J550675.raw

L:16 M:270 C: Current Application Number differs, Replaced Current Application Number
L:17 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:66 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:115 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0